WORLD HEALTH ORGANIZATION
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POUR LA MÉDITERRANÉE ORIENTALE

SHORT COURSE ON SOLID WASTES
COLLECTION AND DISPOSAL

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EMRO 134

Lecture No.11

Street Cleansing

The decision concerning hand sweeping vs. mechanical sweeping will vary from city to city, dependent largely on (a) total costs and (b) the employment situation. Both will be considered.

A. Hand sweeping

1. In Europe (1961) approximately 75 percent of street cleaning was by hand compared to 25 to 50 percent in U.S.A.
2. In Mid East and Asia probably very small percent of mechanical street sweeping
3. More attention deserves to be given to equipment used.
   a. In India, brooms without handles
   b. In some adjoining countries, a small handle has been added
   c. Surprisingly efficient but may be an improved design would be more so
   d. Push-brooms require less bending, but are heavier; have advantages and disadvantages
4. The value of pushcarts for street-sweepers
   a. Can take larger quantities to collection points
   b. Less spillage
   c. Dust pans
   d. Proper design (photo - Public Works - April 1962 - p.103)
      I. Should be easily loaded and unloaded
      II. Have good wheels and axles
      III. Keep painted

5. Sweeping sidewalks

B. Street flushing

1. Only used where water is plentiful and sewer system is available
   a. Flushing with heavily silted water questionable practice (Calcutta)
   b. Requires frequent cleaning of catchment basins
2. Is desirable where it can be used
3. If street gradient is fairly flat, flushing must be frequent enough to prevent development of mosquitoes.

C. Street Litter

1. Obligations of shop-owners, etc.
   a. In Calcutta: pottery tea-cups, banana leaves
   b. In Bombay
2. Value of public litter containers
   a. Hung on lamp-posts
   b. Free standing
   c. Spacing-frequency
   d. Collection from them
   e. Used by merchants?
3. Problem less in Europe and Asia than in U.S.A.

D. Mechanical Sweepers

1. Mechanical sweeper-collector
   a. Transverse rotary brushes - 7 ft. width of sweep
   b. Gutter broom of steel wire
      (photo - Mechanical Street Sweeping - p.4 lower) and
      (photos - " " " - p.5-both plates)
   c. Dirt and litter carried from brushes to body of vehicle by conveyor belt or paddle-type elevators.
2. Suction Sweep-collectors
   a. Brushes sweep the dirt into path of suction nozzle: suction conveying dirt to body of vehicle.

b. Additional suction pipe for leaves on walk (photo - Mech. Street Sweeping, p.20 Plate IV.b)

3. Suction-assisted power sweepers
   a. Suction provides dust control over brushes
   b. Dirt and litter thrown direct into dirt hopper by brushes
4. Smaller mechanical sweeper
   a. Driver-controlled
      (photos - Mechanical Street Sweeping - between pages 20 - 21, Plates V(a) and V(b)
5. Problems
   a. Large type costly - first cost and maintenance
   b. Unless rigid parking restrictions imposed, difficult to sweep gutters other than at night
   c. Relatively short mileage (18-20) per day
   d. Smaller equipment
      I. Less costly
      II. Better manoeuverability
      III. Much smaller dirt capacity - must be dumped more frequently
   e. Dumping and disposal of dirt collected.

References: "Street Cleaning Practices" - prepared by American Public Works Association - published by Public Administration Service, 1313E.60th St. Chicago, Ill.

"Mechanical Street Cleansing" - Patrick; published by Temple Press Books, 42 Russell Square, London, W.C.1, in association with the Institute of Public Cleansing.